AMENDMENT TO THE CLAIMS

1. (Currently Amended) A method of identifying a clean speech signal from a noisy speech signal, the method comprising:

identifying a set of log-magnitude frequency values for each of a plurality of frames that represent the noisy speech signal;

filtering the log-magnitude frequency values of the noisy speech signal to smooth the log-magnitude frequency values over time to form filtered noisy values;

determining parameters of at least one posterior probability distribution of at least one component of a clean signal value based on the set of filtered noisy~~frequency~~ values without applying a frequency-based transform to the set of filtered noisy~~frequency~~ values, the posterior probability distribution providing the probability of a log-magnitude frequency value for a clean speech signal given a filtered noisy value; and

using the parameters of the posterior probability distribution to estimate a set of log-magnitude frequency values for a clean speech signal.

2. (Canceled)

3. (Currently Amended) The method of claim 1 further comprising taking the exponent of each of the log-magnitude frequency values in the set of log-magnitude frequency values for the clean speech signal to produce a set of magnitude values for the clean speech signal.

4. (Original) The method of claim 3 further comprising transforming the set of magnitude values for the clean speech signal into a set of time domain values representing a frame of the clean speech signal.

5. (Currently Amended) The method of claim 4 wherein identifying a set log-magnitude frequency values for a frame of the noisy speech signal comprises ~~further comprising~~ transforming a frame of the noisy speech signal into the frequency domain to form ~~the~~ frequency values for the noisy speech signal and taking the log of the magnitude of the frequency values.

6. (Original) The method of claim 5 wherein transforming a frame of the noisy speech signal into the frequency domain further comprises generating a set of frequency phase values and wherein transforming the set of magnitude values for the clean speech signal into a set of time domain values further comprises using the set of frequency phase values to transform the set of magnitude values.

7. (Canceled)

8. (Currently Amended) The method of claim ~~1~~7 wherein filtering the log-magnitude frequency values of the noisy speech signal comprises applying the log-magnitude frequency values of the noisy speech signal to ~~the time based filter comprises~~ a Finite Impulse Response filter.

9. (Original) The method of claim 5 wherein transforming a frame of the noisy speech signal into the frequency domain comprises producing a set of more than one hundred frequency magnitude values.

10. (Original) The method of claim 1 wherein determining the parameters of at least one posterior probability distribution comprises utilizing an iterative process to determine the parameters.

11. (Original) The method of claim 1 wherein determining parameters of at least one posterior distribution comprises determining parameters for each of a set of mixture components.

12. (Currently Amended) A computer-readable storage medium storing~~having~~ computer-executable instructions for performing steps comprising:

applying values that represent frames of a noisy speech signal to time-based filtering to produce filtered values representing noisy speech;

determining a posterior probability based on the filtered~~logarithms of frequency values that represent a frame of a noisy speech signal~~, wherein a frequency-based transform is not applied ~~to the logarithms of frequency values~~ before the filtered~~logarithms of frequency~~ values are used to determine the posterior probability and wherein the posterior probability provides the probability of the frequency values for a clean speech signal given the filtered values; and

using the posterior probability to estimate a frame of a clean speech signal.

13. (Currently Amended) The computer-readable storage medium of claim 12 wherein estimating a frame of a clean speech signal comprises estimating log-magnitude frequency values for the frame of the clean speech signal.

14. (Currently Amended) The computer-readable storage medium of claim 13 further comprising taking the exponent of the log-magnitude frequency values to form magnitude values.

15. (Currently Amended) The computer-readable storage medium of claim 14 further comprising transforming the magnitude values into time-domain values representing a frame of the clean speech signal.

16. (Currently Amended) The computer-readable storage medium of claim 15 wherein transforming the magnitude values comprises performing an inverse Fast Fourier Transform.

17. (Currently Amended) The computer-readable storage medium of claim 16 wherein performing an inverse Fast Fourier Transform further comprises using phase values generated by converting the frames of the noisy speech signal from the time domain to the frequency domain.

18. (Currently Amended) The computer-readable storage medium of claim 12 wherein determining a posterior probability comprises using an iterative process to determine the posterior probability.

19. (Currently Amended) The computer-readable storage medium of claim 12 wherein determining a posterior probability comprises determining a separate posterior probability for each mixture component in a set of mixture components.

20. (Canceled)